

Effectively Translating Venous Thromboembolism (VTE) Evidence: Effort to "Stop That Clot!"

Kristina Holleran BSN, RN

Lehigh Valley Health Network, Kristina.Holleran@lvhn.org

Debra Peter MSN, RN-BC

Lehigh Valley Health Network, Debra.Peter@lvhn.org

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Question of the Day

***What is the most
common preventable
cause of hospital
death?***

Answer to the Question of the Day

BLOOD CLOTS!!

Venous Thromboembolism

Pulmonary Embolism

VTE

DVT

VTE Prevention: Efforts to ‘Stop That Clot!’

**Kristina Holleran BSN,RN,CMSRN
Debra Peter MSN,RN-BC,CMSRN**



Case Study



Event

- 18 year old admitted for 'cat bite left ankle'
- Hospital day 4 – c/o dyspnea, sharp chest pain and a rapid heart rate
- Tests positive for PE

Considerations

- Risk factors – BCP, smoking, Crohn's disease, immobility, family hx
- Prevention - PCDs, heparin

Findings

- PCDs were documented once during the hospital stay on Day 3
- Patient refused heparin two times during the hospital stay - no documented followup
- Review of the medical record showed Insufficient nursing documentation, lack of follow-through, no VTE patient education and failure to follow provider's order to initiate and maintain PCDs

Significance

- Additional unnecessary stress and complications for this 18 year old!
- Increased healthcare costs!
- Potential for a preventable hospital death!

VTE 101

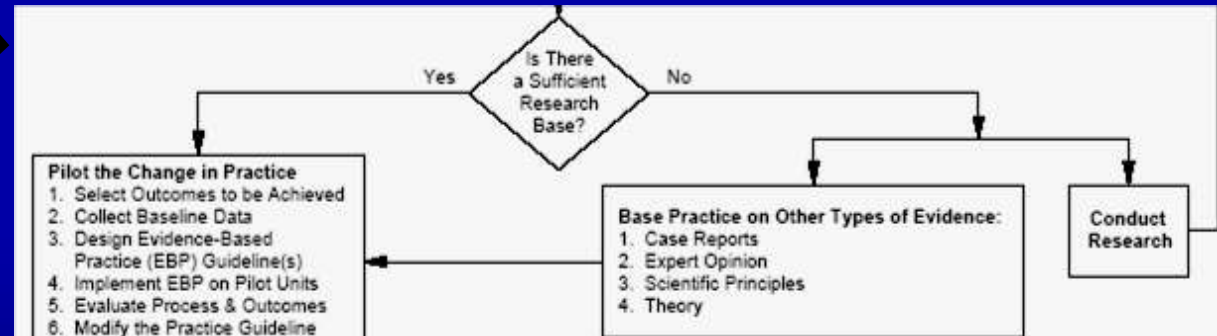
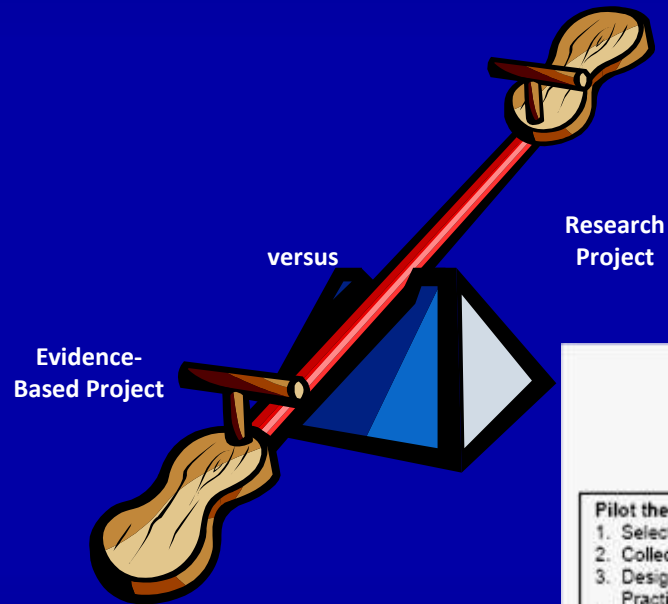
- **VTE – venothrombolytic event**
 - DVT – deep vein thrombosis
 - PE – pulmonary emboli
- **Symptoms:**
 - DVT – extremity edema, leg pain/tenderness when standing or walking, redness, enlarged veins
 - PE – sudden dyspnea, sharp chest pain, pain in the back, cough w/bloody sputum, rapid pulse
- **Risk Factors:**
 - Inherited condition that increases risk for clotting
 - Cancer and cancer treatment
 - Limited blood flow in a deep vein (due to injury, surgery or immobility)
 - Pregnancy and the first 6 weeks after giving birth
 - Age over 40
 - Obesity
 - Birth control pills or hormone therapy
- **Prevention:**
 - PCDs – pneumatic compression devices
 - SCDs – sequential compression devices
 - Chemical prophylaxis
- **Diagnosis:**
 - Ultrasound and venography
- **Treatment:**
 - Anticoagulants

Background/Purpose

- Iatrogenic DVT events
 - Insufficient nursing documentation
 - Lack of follow-through and failure to follow orders
- Nurse inquiry
 - Are PCDs ordered appropriately?
 - What is 'best practice?'
- New EBP network wide opportunity!
- EBP team formed

Using the IOWA Model as our GUIDE

The Iowa Model of Evidence-Based Practice to Promote Quality Care



Compelling Evidence

A light bulb moment!



- VTE “- most common preventable cause of hospital death,” with VTE prophylaxis - the “number one patient safety practice” (Agency for Healthcare Research and Quality [AHRQ], 2008).
- American College of Chest Physicians criteria for risk - **51%-53% of medical patients are at risk for VTE.** (Moores, 2009, p.5)
- American Public Health Association - “74% of adults have negligible knowledge of DVT and its effects on health.” (as cited in Le Sage, McGee & Emed, 2008).
- American Public Health Association - “the disconnect between evidence and execution as it relates to DVT prevention amounts to a public health crisis.” (as cited by Maynard and Stein, 2008).
- Studies suggest - considerable barrier to optimal VTE prophylaxis utilization is that healthcare staff underrecognize problem that prophylaxis is underutilized in patients. (Lloyd et.al. 2012).
- BonTon table with blood clot literature!

Good News?

- Evidence is out there for us to use!
- LVHN physicians are identifying patients at risk for blood clots.
- LVHN physicians are ordering prevention measures for their patients according to the current guidelines (compression boots and blood thinner medicine).

Compression Devices

- Purpose/Procedure -
 - to intermittently squeeze the foot, calf or thigh to:
 - Augments venous blood flow velocity (thereby reducing stasis)
 - Enhances fibrinolytic activity to reduce the risk of early clot formation
 - continuous external pneumatic compression is recommended until the patient is fully ambulatory
 - **notify the provider for interruption of therapy for a substantial length of time**
 - document presence of compression device every shift
 - obtain order to discontinue compression device for patient who is refusing
- Benefit – no increased risk for bleeding
- Disadvantage – patient and staff compliance!
- Primary indications for use -
 - MVA – current diagnosis
 - Spinal cord injuries/paralysis
 - Orthopedic injuries/surgery
 - Bleeding issues
 - Patient refusing chemical prophylaxis

Teaching Our Patients

- You may be at risk for developing blood clots.
- Limit sitting for long periods of time - get up & walk around.
- Stop smoking!
- Change position every 2 hours.
- Wear compression devices for the majority of the day, when ordered.
- If prescribed, take medication to reduce blood clots (do not refuse!)

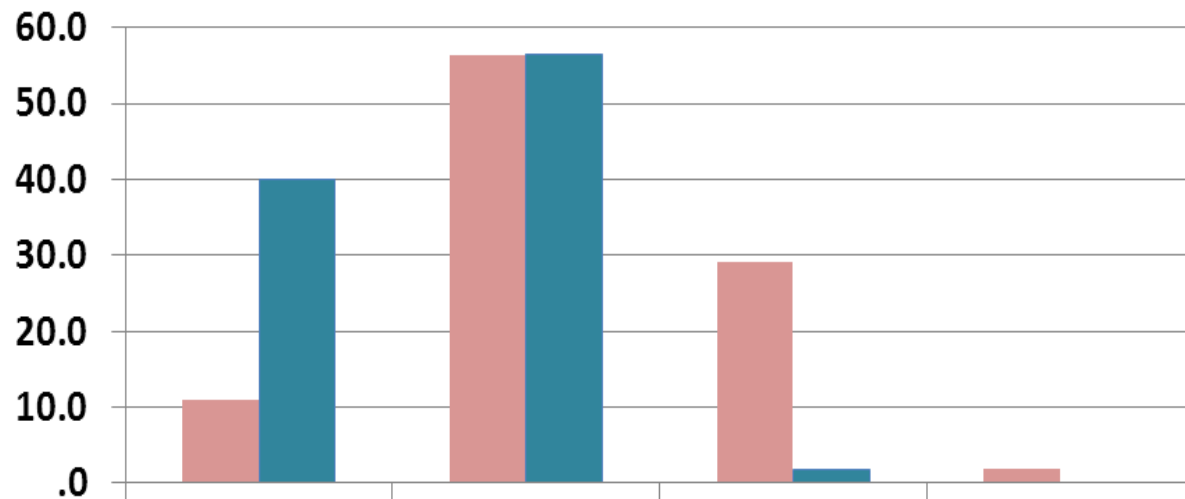
IMPORTANT -> VTE prevention teaching MUST be documented!!

Project Specifics

- Complete pre-survey assessing VTE Risk & Prevention Nurse Awareness
- Complete monitoring aspects and compliance of VTE risk and prevention
- Educate professional and non-professional staff
- Prepare for change

ORDERS –Diligence (Nurse Perception)

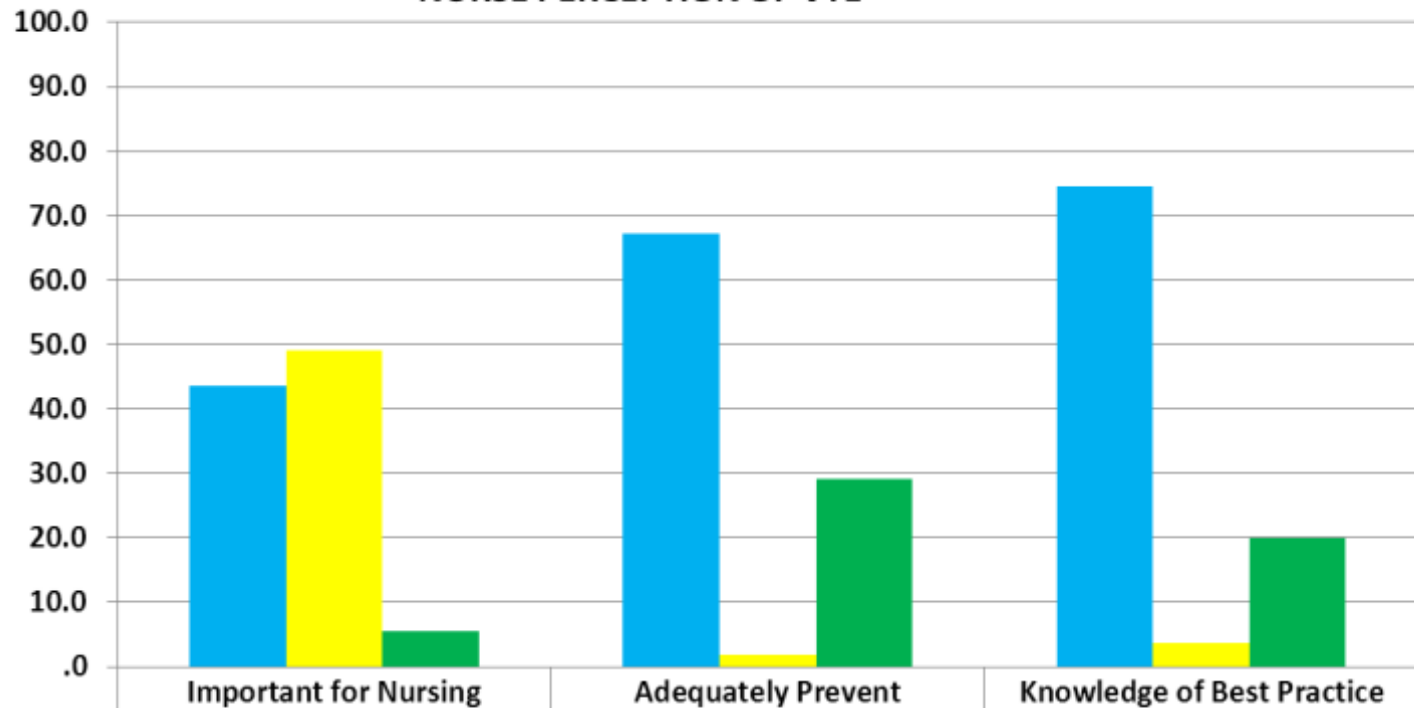
DILIGENCE to ordered PROPHYLAXIS



PCDS	10.9	56.4	29.1	1.8
CHEM PROPHYLAXIS	40.0	56.4	1.8	

NURSE PERCEPTIONS

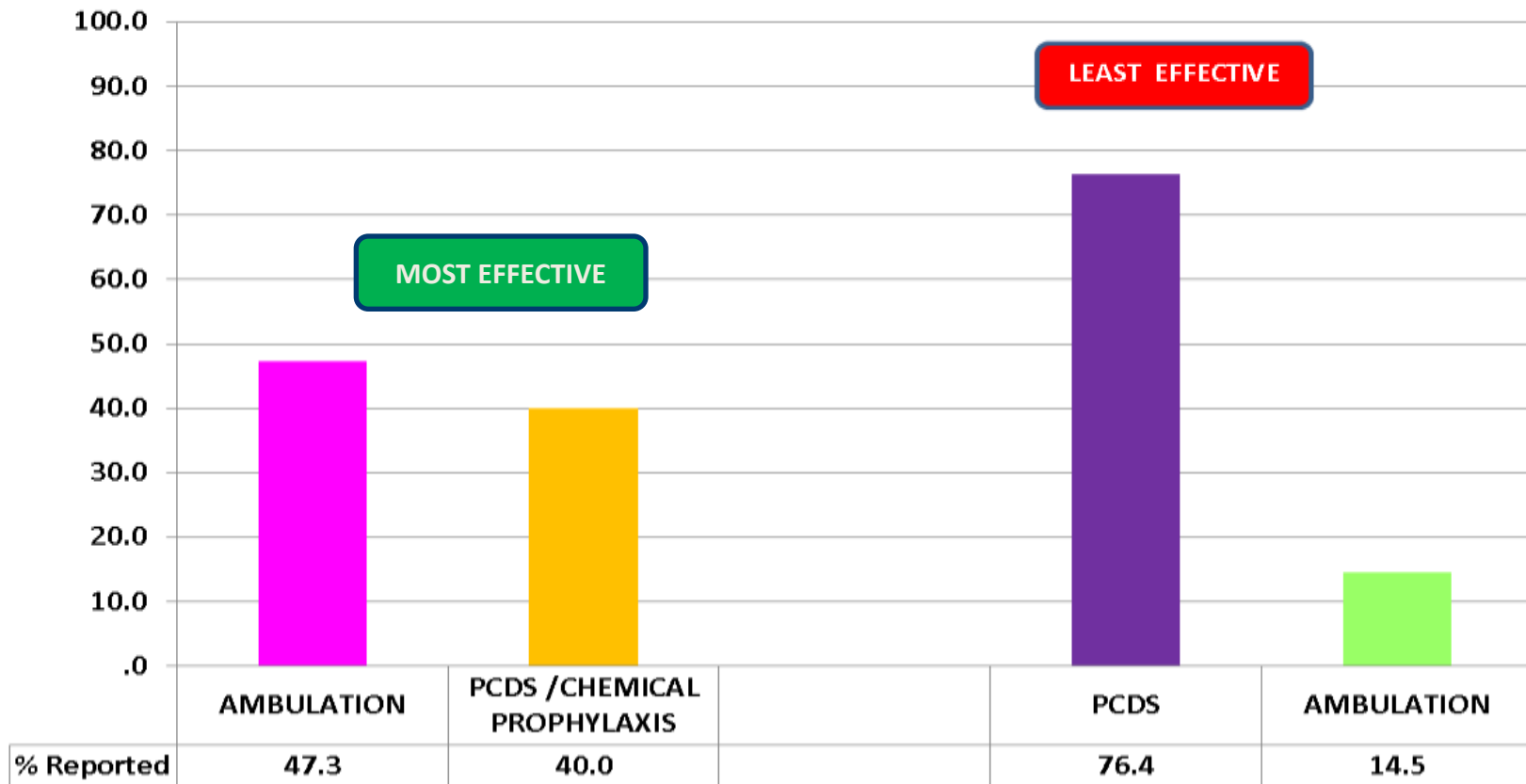
NURSE PERCEPTION OF VTE



Agree	43.6	67.3	74.5
Strongly Agree	49.1	1.8	3.6
Strongly Disagree	5.5	29.1	20.0
Strongly Disagree	2.2	38.1	30.0
Strongly Agree	48.1	1.8	3.6
Agree	43.6	67.3	74.5

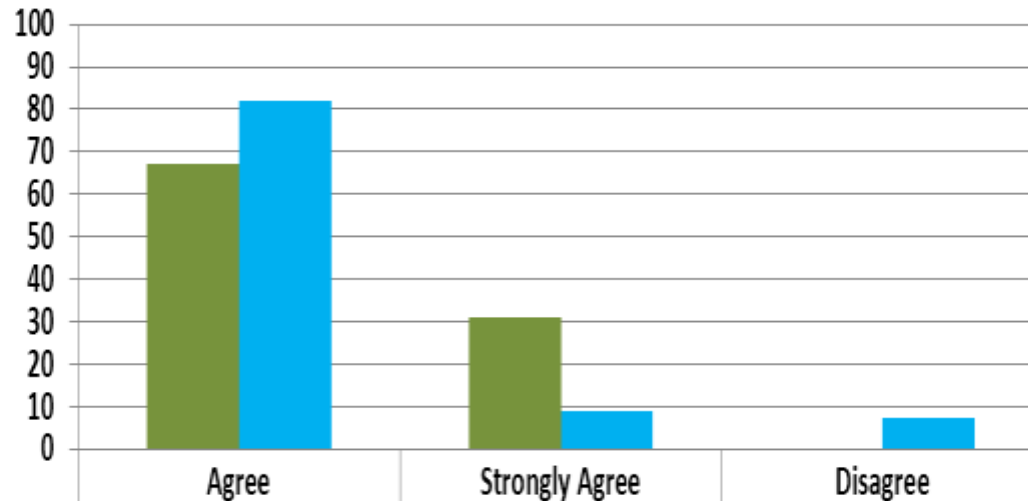
EFFECTIVENESS – Nurse Perception

EFFECTIVENESS of VTE PROPHYLAXIS
Nurse Perception



PERCEPTIONS v. ACTUAL

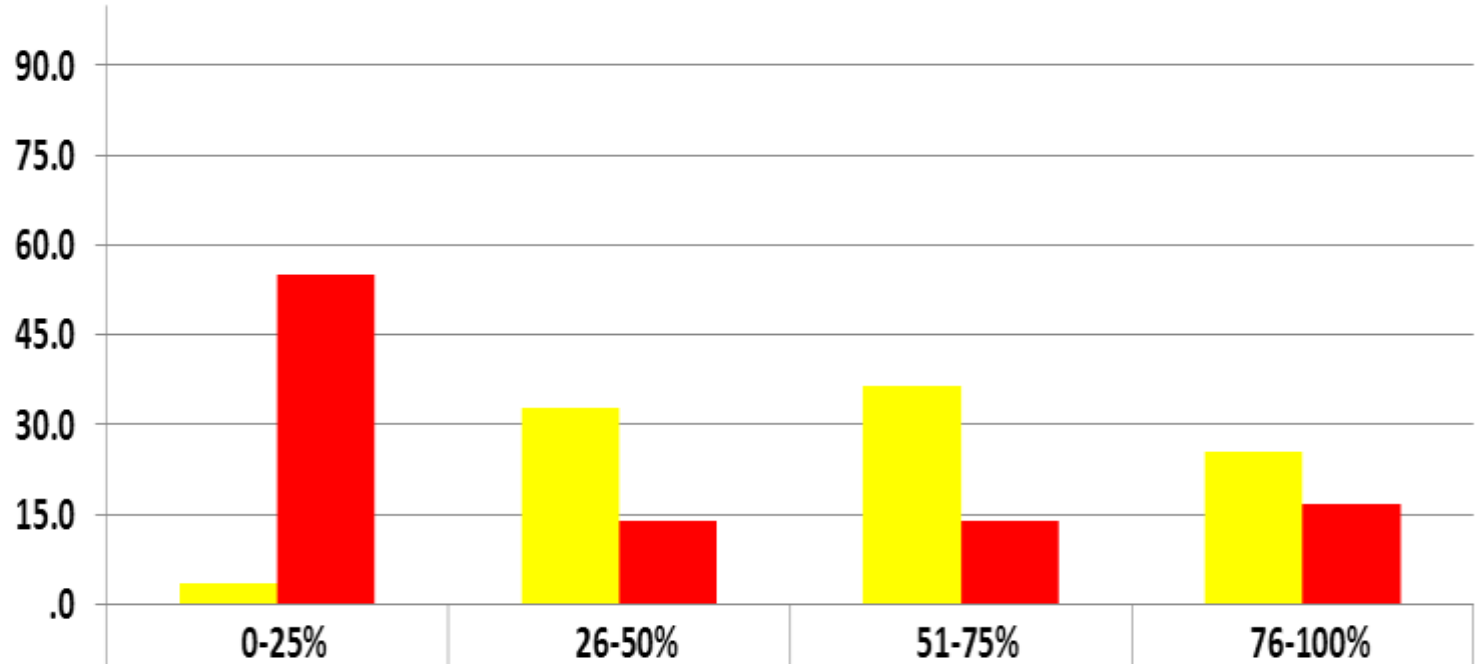
EDUCATION PROCESSES - NURSE PERCEPTION v. ACTUAL



Pt. Refusal Education	67.3	30.9	
Consistent Education on VTE Risk	81.8	9.1	7.3

COMPLIANCE with PCDS

COMPLIANCE WITH PCDS

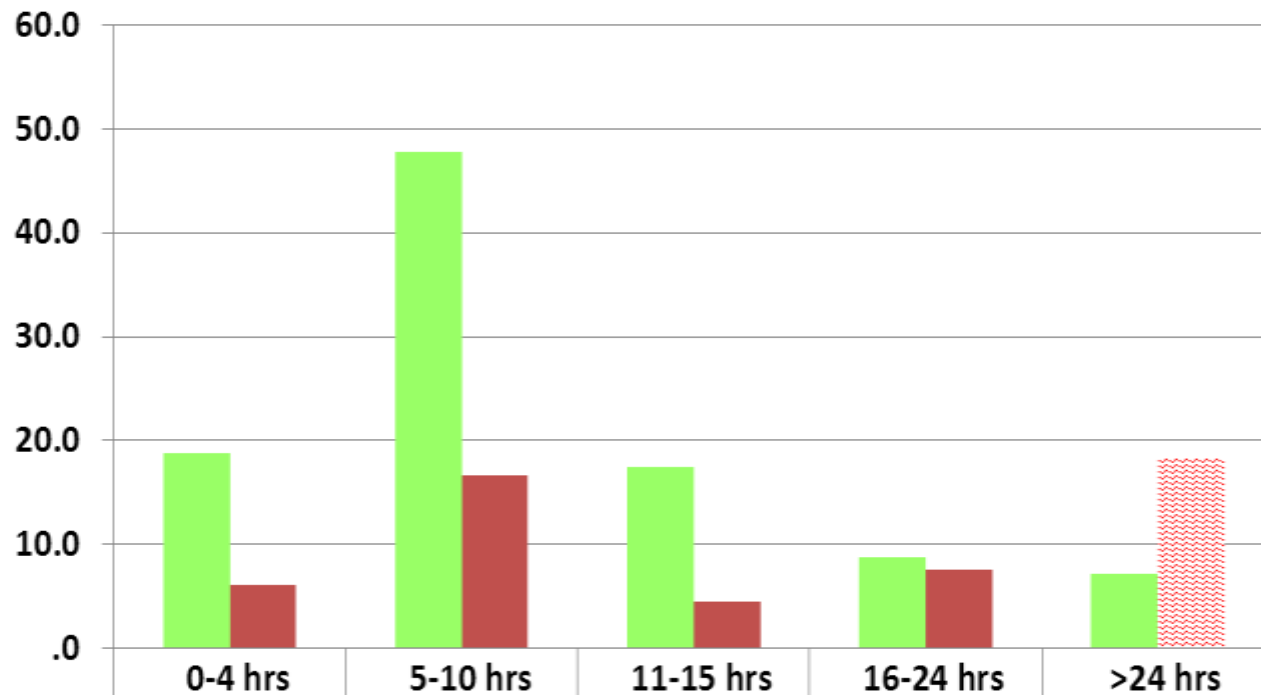


Self-Reported	3.6	32.7	36.4	25.5
Observed (n = 36)	55.0	13.8	13.8	16.7

Observed (n = 36)	22.0	13.8	13.8	16.7
Self-Reported	3.6	32.7	36.4	25.5

OBSERVED INITIATION TIMES

TIME to INITIATE PROPHYLAXIS



PCDS	18.8	47.8	17.4	8.7	7.2
CHEM PROPHYLAXIS	6.1	16.7	4.5	7.5	18.2

CHEM PROPHYLAXIS	6.1	16.7	4.5	7.5	18.2
PCDS	18.8	47.8	17.4	8.7	7.2

0-4 hrs 5-10 hrs 11-15 hrs 16-24 hrs >24 hrs

Summarizing Our Project

Question:



How does an education program focused on nurse awareness of VTE risk and prevention on a medical patient care unit (5K) compare to a similar medical unit (6K) without an education program impact compliance with ordered VTE prophylaxis measures?

Defining our PURPOSE:



To improve compliance with VTE prophylaxis measures by increasing nurse awareness to the importance of VTE risk and prevention.

Next Steps

- Consider focus group intervention
- Distribute post-survey
- Network wide implementation

Ultimate GOAL



Together, let's
'STOP that CLOT!'

Questions?

